REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1 and 19 have been amended. Claims 3, 5-6, 9-10, 21, 23-24, 27-28, and 50 were previously withdrawn. Claims 1-13, 15, 17, 19-31, 33, 35, and 49-50 are pending and under consideration.

This amendment is believed to place the application in condition for allowance, and entry therefore is respectfully requested. In the alternative, entry of this amendment is requested as placing the application in better condition for appeal by, at least, reducing the number of issues outstanding.

Entry of Amendment under 37 C.F.R. § 1.116

The Applicant requests entry of this Rule 116 Response because the amendment does not significantly alter the scope of the claims and places the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures (M.P.E.P.) sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The M.P.E.P. further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

I. Rejections under 35 U.S.C. § 101

In the Office Action, at page 2, claims 1-2, 4, 7-8, 11-13, 15, 17, 19-20, 22, 25-26, 29-31, 33, 35 and 49 were rejected under 35 USC § 101 as being directed to non-statutory subject matter. More specifically, the Examiner indicates that the method steps do not result in a physical transformation nor do they provide a useful, concrete and tangible result, but instead appear to manipulate data in a computer. Also, the Examiner indicates that the means do not result in a physical transformation nor do they provide a useful, concrete and tangible result, but instead appear to be a CPU, a RAM, a ROM, or a floppy disk to manipulate data in a computer.

Applicants respectfully traverse this rejection. Independent claims 1 and 19 have been amended and independent claims 1, 19, and 49 each recite the features of "covering said board

with said first insulating layer to form a wiring pattern connected to said first electrical component" and "forming via holes in the first insulating layer in accordance with the corrected design data," which provide a physical transformation of the claimed component-embedded board. Accordingly, withdrawal of the § 101 rejection is respectfully requested.

II. Rejections under 35 U.S.C. § 112

In the Office Action, at page 2-3, claims 1-2, 4, 7-8, 11-13, 15, 17, 19-20, 22, 25-26, 29-31, 33, 35 and 49 were rejected under the first and second paragraphs of 35 USC § 112 as failing to comply with the written description requirement and as being indefinite. Independent claims 1 and 19 have been amended in response to these rejections. Also, it is submitted that independent claim 49 does not contain the recitation "if the represented displacement does not exceed ... no corrections to the design data" that has been indicated by the Examiner. Therefore, the 35 USC § 112, first and second paragraphs rejection of claim 49 was improper. The remaining claims depend from claims 1 and 19. Accordingly, withdrawal of these § 112 rejections is respectfully requested.

III. Rejections under 35 U.S.C. § 103

In the Office Action, at pages 3-6, claims 1-2, 4, 7-8, 11-13, 15, 17, 19-20, 22, 25-26, 29-31, 33, 35 and 49 were rejected under 35 USC § 103(a) as being unpatentable over Taff et al. (U.S. Patent No. 6,165,658) in view of Leedy (U.S. Patent No. 5,103,557).

Taff et al. and Leedy, alone or in combination, do not discuss or suggest:

> determining whether the first displacement data represents a displacement that exceeds a predetermined maximum value at which the board is rendered defective; and
>
> correcting, based on said first displacement data, design data to be used for processing said board, covering said board with said first insulating layer to form a wiring pattern connected to said first electrical component, and forming via holes in the first insulating layer in accordance with the corrected design data only if the represented displacement does not exceed the predetermined maximum value,

as recited in amended claim 1. In other words, the invention of claim 1 provides for determining whether the displacement value between a design position and an actual position exceeds a predetermined maximum value at which the board is rendered defective. Thereafter, the invention of claim 1 provides for performing corrections on design data to be used for processing the board only if the displacement value does not exceed the predetermined maximum value. Subsequent to performing corrections on the design data, claim 1 provides for covering the

board with the first insulating layer to form a wiring pattern connected to the first electrical component and for forming via holes in the first insulating layer in accordance with the corrected design data. As such, the covering and forming are also performed only when the displacement value does not exceed the predetermined maximum value. In this manner, the invention of claim 1 serves to further increase the fabrication yield because seriously defective parts that cannot be remedied by the correction process can be completely eliminated and not further processed, thus saving unnecessary processing time.

The Examiner indicates that Taff et al. discloses the above discussed features of claim 1 at col. 7, lines 66-67, col. 8, lines 1-5, and col. 8, lines 5-45. However, this is submitted to be incorrect. Taff et al. discloses determining the difference between the locations of conductive site 12 and conductive site 24, which are located on successive layers of a multi-layer PCB. However, Taff et al. provides for correcting the determined difference regardless of the amount or degree of the difference. Taff et al. does not provide for determining whether or not the difference exceeds a predetermined maximum value at which the PCB is rendered defective and correcting design data to be used for processing said board, covering the board with a first insulating layer to form a wiring pattern connected to a first electrical component, and forming via holes in the first insulating layer in accordance with the corrected design data only if the represented displacement does not exceed the predetermined maximum value. Leedy fails to make up for these deficiencies in Taff et al.

Since Taff et al. and Leedy, either alone or in combination, do not disclose these features of claim 1, claim 1 patentably distinguishes over Taff et al. and Leedy. Accordingly, withdrawal of this § 103(a) rejection is respectfully requested.

Claims 2, 4, 7-8, 11-13, 15, and 17 depend either directly or indirectly from claim 1, and include all the features of claim 1, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 2, 4, 7-8, 11-13, 15, and 17 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 103(a) rejections is respectfully requested.

Taff et al. and Leedy, alone or in combination, do not discuss or suggest:

> determining whether the first displacement data represents a displacement that exceeds a predetermined maximum value at which the board is rendered defective; and
>
> correcting, based on said first displacement data, design data to be used for processing said board, covering said board with said first insulating layer to form a wiring pattern connected to said first electrical component, and forming via holes in the first insulating

> layer in accordance with the corrected design data only if the represented displacement does not exceed the predetermined maximum value,

as recited in amended claim 19, so that claim 19 patentably distinguishes over Taff et al. and Leedy. Accordingly, withdrawal of this § 103(a) rejection is respectfully requested.

Claims 20, 22, 25-26, 29-31, 33, and 35 depend either directly or indirectly from claim 19, and include all the features of claim 19, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 20, 22, 25-26, 29-31, 33, and 35 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 103(a) rejections is respectfully requested.

Taff et al. and Leedy, alone or in combination, do not discuss or suggest:

> means for determining whether the first displacement data represents a displacement that exceeds a predetermined maximum value at which the board is rendered defective; and
>
> means for correcting, based on said first displacement data, design data to be used for processing said board, covering said board with said first insulating layer to form a wiring pattern connected to said first electrical component, and forming via holes in the first insulating layer in accordance with the corrected design data, only if the represented displacement does not exceed the predetermined maximum value,

as recited in claim 49, so that claim 49 patentably distinguishes over Taff et al. and Leedy. Accordingly, withdrawal of this § 103(a) rejection is respectfully requested.

IV. Interview Request

Applicants respectfully request a telephone interview between Applicants' representative, the undersigned, and the Examiner at the Examiner's earliest convenience, in order to discuss the amendments and arguments presented in the current response. The undersigned can be reached by telephone directly at (202) 454-1583.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 1-29-09

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